

VIEW WATER DEVELOPMENT COMPANY (PWS 5160043) SOURCE WATER ASSESSMENT FINAL REPORT

December 5, 2002



State of Idaho Department of Environmental Quality

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Executive Summary

Under the Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the act. This assessment is based on a land use inventory of the designated assessment area, sensitivity factors associated with the sources, and aquifer characteristics.

This report, *Source Water Assessment for View Water Development Company, Burley, Idaho* describes the public drinking water system, the boundaries of the zones of water contribution, and the associated potential contaminant sources located within these boundaries. This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this source. **The results should not be used as an absolute measure of risk and they should not be used to undermine public confidence in the water system.**

The View Water Development Company drinking water system (PWS 5160043) consists of one spring located 9 miles southeast of Burley (Figure 1). The spring, constructed in 1930, currently serves approximately 112 people through 46 connections. Water is collected from a spring roughly two miles up gradient and is stored in a 40,000 gallon tank on a lot owned by the water system.

Final susceptibility scores are derived from equally weighting system construction scores, hydrologic sensitivity scores, and potential contaminant/land use scores. Therefore, a low rating in one or two categories coupled with a higher rating in other categories results in a final rating of low, moderate, or high susceptibility. With the potential contaminants associated with most urban and heavily agricultural areas, the best score a well or spring can get is moderate. Potential contaminants are divided into four categories, inorganic contaminants (IOCs, e.g. nitrates, arsenic), volatile organic contaminants (VOCs, e.g. petroleum products), synthetic organic contaminants (SOCs, e.g. pesticides), and microbial contaminants (e.g. bacteria). As different springs and wells can be subject to various contamination settings, separate scores are given for each type of contaminant.

Overall, the spring's susceptibility ratings are moderate for IOCs, VOCs, SOCs, and low for microbial contaminants. The system construction scores rated high, and land use scores rated moderate for IOCs, low for VOCs, moderate for SOCs, and low for microbials (Table 2).

No SOCs, VOCs, or bacteria have ever been detected in the spring water. The only IOCs detected in the sampled water have been barium, fluoride, and nitrate. All of the detected IOCs have been in quantities significantly below their maximum contaminant levels (MCLs), as set by the Environmental Protection Agency (EPA). Nitrate quantities have never been detected above 2.0 parts per million (ppm), significantly below its MCL of 10 ppm. County level nitrogen fertilizer use, county level herbicide use, and total county level agricultural chemical use are rated as high. Total coliform and E.coli have been detected in the distribution system, but not at the spring.

This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses that require surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources. If the system should need to expand in the future, new well or spring sites should be located in areas with as few potential sources of contamination as possible, and the site should be reserved and protected for this specific use.

For the View Water Development Company, drinking water protection activities should first focus on correcting any deficiencies outlined in the 2001 Sanitary Survey (an inspection conducted every five years with the purpose of determining the physical condition of a water system’s components and its capacity). The spring source should be located and maintained according to the Idaho Administrative Code for Public Drinking Water Systems (IDAPA 58.01.08.04). No chemicals should be stored or applied within 100 feet of the spring. There are potential contaminant sources within the delineated area, therefore View Water Development Company should focus on managing hazardous material on-site in a proper manner. Other practices aimed at reducing the leaching of agricultural chemicals from agricultural land within the designated source water area should be implemented. As most of the designated areas are outside the direct jurisdiction of View Water Development Company, partnerships with state and local agencies, and industry groups should be established and are critical to success.

Due to the time involved with the movement of ground water, drinking water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term. There are multiple resources available to help communities implement protection programs, including the Drinking Water Academy of the EPA. There are transportation corridors near the delineations, therefore the Department of Transportation should be involved in protection activities. Drinking water protection activities for agriculture should be coordinated with the Idaho State Department of Agriculture, the Soil Conservation Commission, the local Soil Conservation District, and the Natural Resources Conservation Service.

A system with a fully developed drinking water protection program will incorporate many strategies, be they regulatory in nature (e.g. zoning, permitting) or non-regulatory in nature (e.g. good housekeeping, public education, specific best management practices). For assistance in developing protection strategies please contact the Twin Falls Regional Office of the Idaho Department of Environmental Quality or the Idaho Rural Water Association.

SOURCE WATER ASSESSMENT FOR VIEW WATER DEVELOPMENT COMPANY, BURLEY, IDAHO

Section 1. Introduction - Basis for Assessment

The following sections contain information necessary to understand how and why this assessment was conducted. **It is important to review this information to understand what the ranking of this source means.** A map showing the delineated source water assessment area and the inventory of significant potential sources of contamination identified within that area are attached. The list of significant potential contaminant source categories and their rankings, used to develop this assessment, is also attached.

Level of Accuracy and Purpose of the Assessment

The Idaho Department of Environmental Quality (DEQ) is required by the U.S. Environmental Protection Agency (EPA) to assess the over 2,900 public drinking water sources in Idaho for their relative susceptibility to contaminants regulated by the Safe Drinking Water Act. This assessment is based on a land use inventory of the delineated assessment area, sensitivity factors associated with the wells or springs, and aquifer characteristics. All assessments must be completed by May of 2003. The resources and time available to accomplish assessments are limited. Therefore, an in-depth, site-specific investigation to identify each significant potential source of contamination for every public water system is not possible. **This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this source. The results should not be used as an absolute measure of risk and they should not be used to undermine public confidence in the water system.**

The ultimate goal of this assessment is to provide data to local communities to develop a protection strategy for their drinking water supply system. The Idaho Department of Environmental Quality (DEQ) recognizes that pollution prevention activities generally require less time and money to implement than treating a public water supply system once it has been contaminated. DEQ encourages communities to balance resource protection with economic growth and development. The decision as to the amount and types of information necessary to develop a drinking water protection program should be determined by the local community based on its own needs and limitations. Drinking water protection is one facet of a comprehensive growth plan, and it can complement ongoing local planning efforts.

Section 2. Conducting the Assessment

General Description of the Source Water Quality

The View Water Development Company drinking water system (PWS 5160043) consists of one spring located approximately 9 mile southeast of Burley (Figure 1). The spring currently serves approximately 112 people through 46 connections. Water is collected from a spring approximately two miles up gradient and is stored in a 40,000 gallon tank on a lot owned by the water system.

There are no major issues affecting View Water Development Company's water. No SOC's, VOC's, or bacteria have ever been detected in the spring's water. The only IOC's detected in the sampled water have been barium, fluoride, and nitrate. All of the detected IOC's have been in quantities significantly below their MCL's, as set by the EPA. Nitrate quantities have never been detected above 2.0 ppm, significantly below its MCL of 10 ppm. County level nitrogen fertilizer use, county level herbicide use, and total county level agricultural chemical use are rated as high. Total coliform and E.coli have been detected in the distribution system, but not at the spring.

Defining the Zones of Contribution – Delineation

The delineation process establishes the physical area around a well or spring that will become the focal point of the assessment. The process includes mapping the boundaries of the zone of contribution into time-of-travel zones (zones indicating the number of years necessary for a particle of water to reach a well or spring) for water in the aquifer. DEQ used a refined computer model approved by the EPA in determining the time-of-travel (TOT) zones for water associated with the Goose Creek – Golden Valley aquifer south of the Snake River in the vicinity of the View Water Development Company. The computer model used site-specific data, assimilated by DEQ from a variety of sources including local area well logs and hydrogeologic reports summarized below.

Delineation Methods

Delineation of the wellhead protection area for a spring involves special consideration. Hydrogeologic setting is foremost among the factors that control the shape and extent of the capture zone. The capture zone for a spring resulting from the presence of a high-permeability fracture extending to great depth will be much different from the capture zone resulting from a depression spring formed where the ground surface intersects the water table in a unconsolidated aquifer. The latter can be reasonably modeled as either a well or an internal constant-head boundary.

Surface water and ground water divides are assumed to be equivalent when applying the topographic method because ground water divides often mirror drainage basin divides in shallow water table aquifers. Calculating the available recharge within a catchment area is useful for evaluating the validity of this assumption. This information can also be used to determine if the zone of contribution is of adequate area to supply the volume of water discharged by the spring.

The View Water Development Company has a spring source that is located in the identified fault zone on the western side of the East Hills. There are 5 wells drilled in the area that produce out of quartz and quartzite layers. The surficial geologic map theme on ArcView shows that the East Hills watershed contributing to the fault zone in that area is composed on “chert limestone” and “silicic welded tuff.” However, at the top of the watershed, there is a surficial exposure of “schist quartzite.” For this delineation, the topographic watershed upgradient of the spring was combined with the surface exposure boundary of the water-contributing quartzite rock on the western side of East Hills.

The delineated source water assessment area for the View Water Development Company spring can best be described as the watersheds of Spring Canyon and Water Canyon upgradient of the spring, and a 1.5 square mile area on the east side of East Hill ridge directly opposite of Water Canyon’s watershed (Figure 2). The data used by DEQ in determining the source water assessment delineation area is available upon request.

Identifying Potential Sources of Contamination

A potential source of contamination is defined as any facility or activity that stores, uses, or produces, as a product or by-product, the contaminants regulated under the Safe Drinking Water Act and has a sufficient likelihood of releasing such contaminants at levels that could pose a concern relative to drinking water sources. The goal of the inventory process is to locate and describe those facilities, land uses, and environmental conditions that are potential sources of ground water contamination. The locations of potential sources of contamination within the delineation areas were obtained by field surveys conducted by DEQ and View Water Development Company and from available databases.

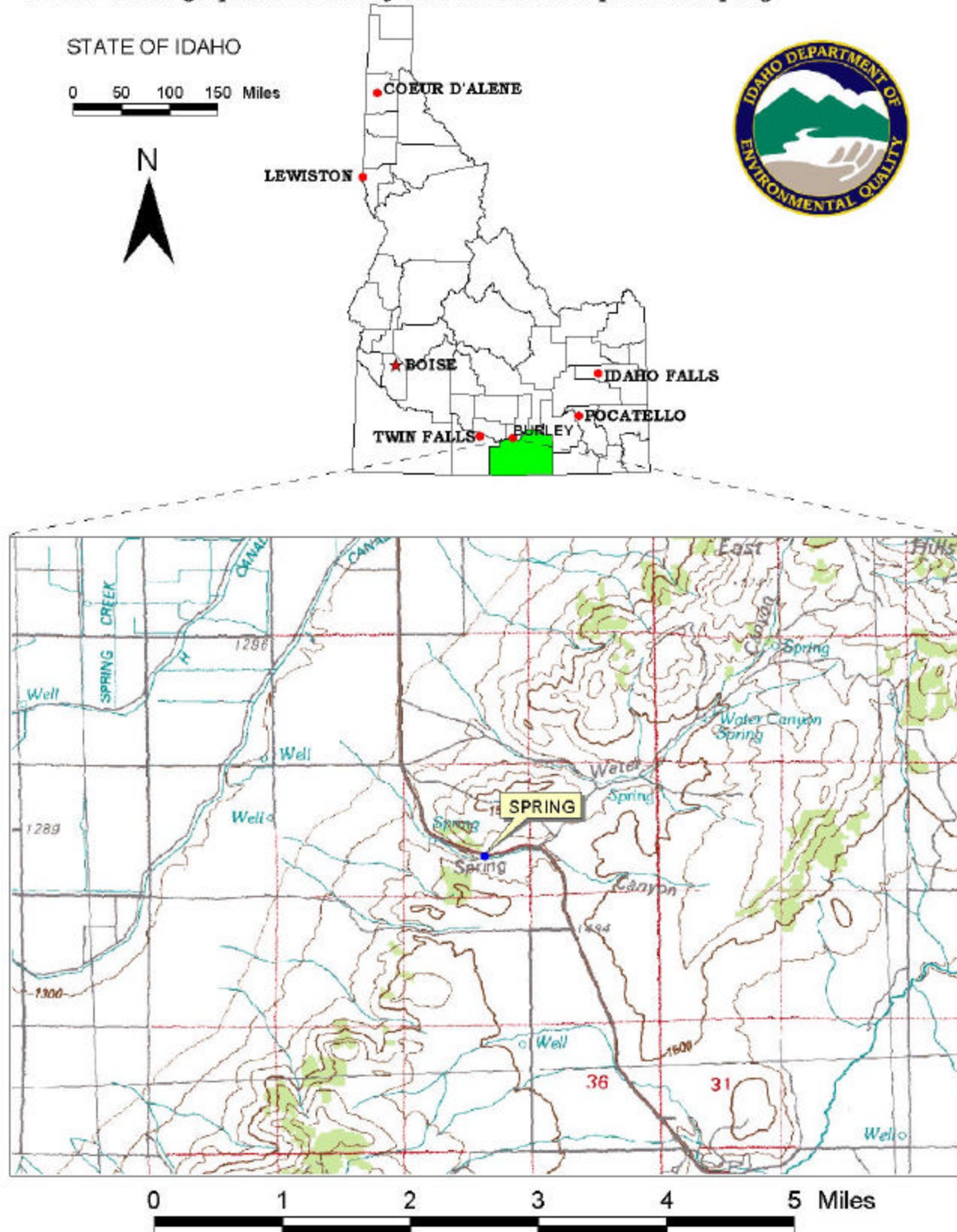
The dominant land use outside the View Water Development Company area is rangeland and woodland. Highway 77 is the major transportation corridor in the area.

It is important to understand that a release may never occur from a potential source of contamination provided best management practices are used by the system. Many potential sources of contamination are regulated at the federal level, state level, or both, to reduce the risk of release. Therefore, when a business, facility, or property is identified as a potential contaminant source, this should not be interpreted to mean that this business, facility, or property is in violation of any local, state, or federal environmental law or regulation. What it does mean is that the potential for contamination exists due to the nature of the business, industry, or operation. There are a number of methods that water systems can use to work cooperatively with potential sources of contamination, such as educational visits and inspections of stored materials. Many owners of such facilities may not even be aware that they are located near a public water supply.

Contaminant Source Inventory Process

A contaminant inventory of the study area was conducted in May and June of 2002. This involved identifying and documenting potential contaminant sources within the View Water Development Company Source Water Assessment Area through the use of computer databases and Geographic Information System (GIS) maps developed by DEQ.

FIGURE 1. Geographic Location of View Water Development Company



The delineation (Table 1, Figure 2) has 2 potential point sources. These potential contaminant sources include a kyanite mine and a geothermal mine. In addition, the transportation corridor Highway 77 is a major source that crosses the delineation. If an accidental spill occurred in any of these sources, IOCs, VOCs, SOCs, or microbial contaminants could be added to the aquifer system.

Table 1. View Water Development Company, Spring, Potential Contaminant Inventory

Site #	Source Description ¹	TOT ZONE ²	Source of Information	Potential Contaminants ³
1	Kyanite Mine	0-3 YR	Database Search	IOC, VOC, SOC
2	Geothermal Mine	0-3 YR	Database Search	IOC, VOC, SOC
	Highway 77	0-3 YR	GIS Map	IOC, VOC, SOC, Microbials

² TOT = time-of-travel (in years) for a potential contaminant to reach the spring

³ IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

Section 3. Susceptibility Analyses

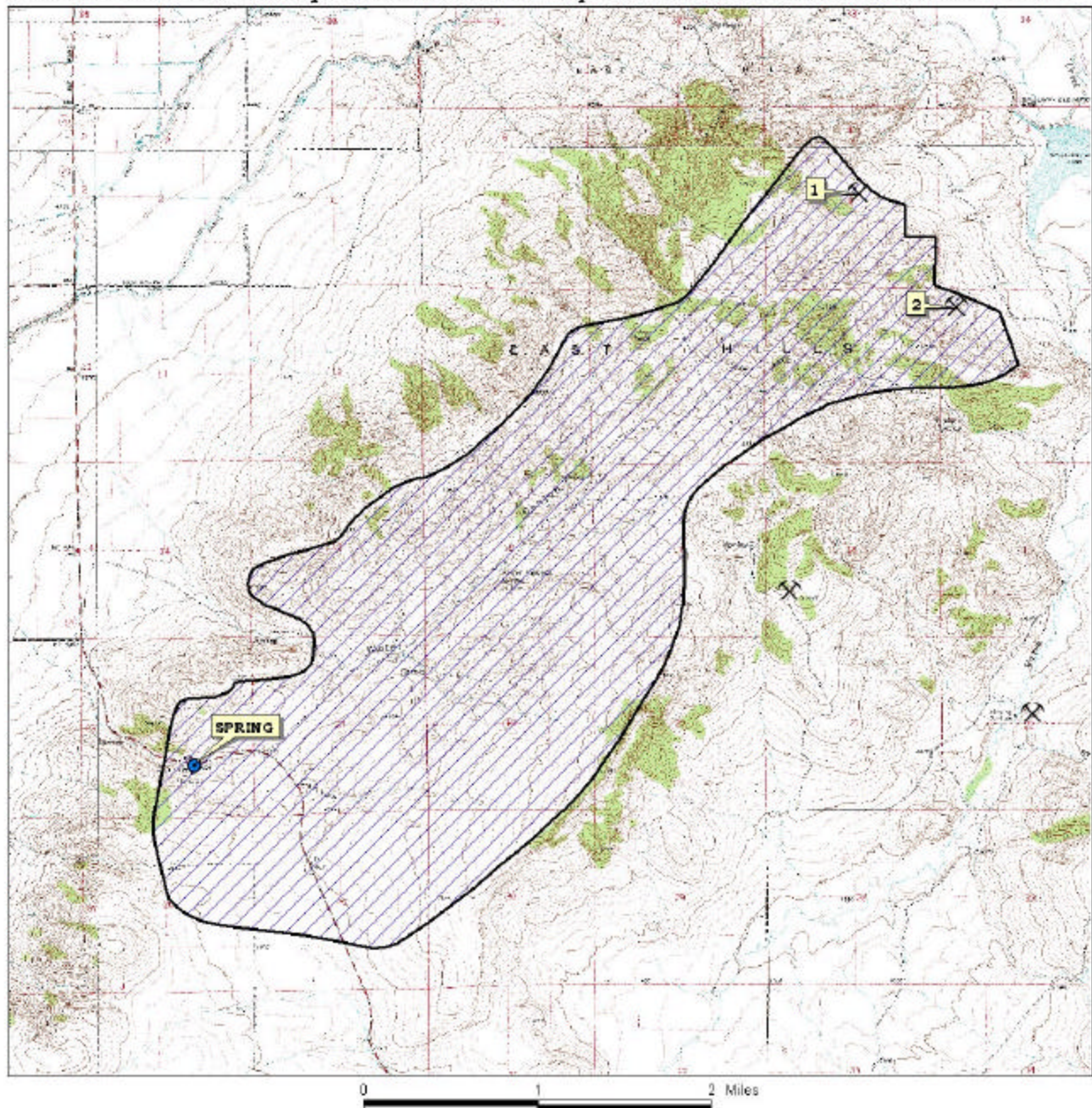
The water system's susceptibility to contamination was ranked as high, moderate, or low risk according to the following considerations: hydrologic characteristics, physical integrity of the spring, land use characteristics, and potentially significant contaminant sources. The susceptibility rankings are specific to a particular potential contaminant or category of contaminants. Therefore, a high susceptibility rating relative to one potential contaminant does not mean that the water system is at the same risk for all other potential contaminants. The relative ranking that is derived for each source is a qualitative, screening-level step that, in many cases, uses generalized assumptions and best professional judgement. Attachment A contains the susceptibility analysis worksheet for the system. The following summary describes the rationale for the susceptibility ranking.

System Construction

System construction directly affects the ability of the intake structure to protect the aquifer from contaminants. System construction scores are reduced when information shows that potential contaminants will have a more difficult time reaching the water in the spring. Lower scores imply a system is less vulnerable to contamination. For example, if the intake structure of the surface water system is properly located and constructed to minimize impacts from potential contaminant sources, then the possibility of contamination is reduced and the system construction score goes down. If the system was constructed in a way that the infiltration gallery is separated from any surface water so as to provide some kind of natural filtration, the water quality is more protected and the system score is reduced.

The system construction score was high for the spring. The conductee of the 2001 Sanitary Survey for this system was not able to fully describe the intake construction of the spring because the operator did not know its exact location. As a result, it is unknown if the intake structure or the infiltration gallery of the spring meets current standards.

FIGURE 2. View Water Development Co. Delineation Map and Potential Contaminant Source Locations



PWS# 5160043
SPRING

Potential Contaminant Source and Land Use

The spring rated moderate for IOCs (e.g. arsenic, nitrate), low for VOCs (e.g. petroleum products), moderate for SOC (e.g. pesticides), and low for microbial contaminants (e.g. bacteria) (Table 2). The mines and transportation corridor contributed the largest numbers of points to the contaminant inventory rating. County level nitrogen fertilizer use, county level herbicide use, and total county level ag-chemical use are rated as high for the spring.

Final Susceptibility Rating

An IOC detection above a drinking water standard MCL, any detection of a VOC or SOC, any storage or application of chemicals within 100 feet of the spring, or a detection of total coliform bacteria or fecal coliform bacteria at the spring will automatically give a high susceptibility rating to a spring, despite the land use of the area, because a pathway for contamination already exists. System construction scores are heavily weighted in the final scores. Having multiple potential contaminant sources in the 0- to 3-year time-of-travel zone (Zone 1B) and much agricultural land contribute greatly to the overall ranking. In terms of total susceptibility, the spring rates moderate for all IOCs, VOCs, SOCs, and low for microbial contaminants.

Table 2. Summary of View Water Development Company Susceptibility Evaluation

Source	Susceptibility Scores ¹								
	Contaminant Inventory				System Construction	Final Susceptibility Ranking			
	IOC	VOC	SOC	Microbials		IOC	VOC	SOC	Microbials
Spring	M	L	M	L	H	M	M	M	L

¹H = High Susceptibility, M = Moderate Susceptibility, L = Low Susceptibility,
IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

Susceptibility Summary

Overall, the spring's susceptibility ratings are moderate for IOCs, VOCs, SOCs, and low for microbial contaminants. The system construction scores rated high, and land use scores rated moderate for IOCs, low for VOCs, moderate for SOCs, and low for microbials

No SOCs, VOCs, or bacteria have ever been detected in the spring's water. The only IOCs detected in the sampled water have been barium, fluoride, and nitrate. All of the detected IOCs have been in quantities significantly below their MCLs, as set by the EPA. Nitrate quantities have never been detected above 2.0 ppm, significantly below its MCL of 10 ppm. County level nitrogen fertilizer use, county level herbicide use, and total county level agricultural chemical use are rated as high. Total coliform and E.coli have been detected in the distribution system, but not at the spring.

Section 4. Options for Drinking Water Protection

The susceptibility assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what the susceptibility ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses that require surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources. If the system should need to expand in the future, new well or spring sites should be located in areas with as few potential sources of contamination as possible, and the site should be reserved and protected for this specific use.

An effective drinking water protection program is tailored to the particular local drinking water protection area. For the View Water Development Company, drinking water protection activities should first focus on correcting any deficiencies outlined in the 2001 sanitary survey. The spring source should be located and maintained according to the Idaho Administrative Code for Public Drinking Water Systems (IDAPA 58.01.08.550.04). No chemicals should be stored or applied within the 100-foot radius of the spring. There are potential contaminant sources within the delineated area, View Water Development Company should focus on managing hazardous material on-site in a proper manner. Other practices aimed at reducing the leaching of any agricultural chemicals from agricultural land within the designated source water area should be implemented. Most of the designated areas are outside the direct jurisdiction of the View Water Development Company. Partnerships with state and local agencies and industry groups should be established and are critical to success.

Due to the time involved with the movement of ground water, drinking water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term. A strong public education program should be a primary focus of any drinking water protection plan as the delineations are near urban and residential land uses areas. Public education topics could include proper lawn and garden care practices, household hazardous waste disposal methods, proper care and maintenance of septic systems, and the importance of water conservation to name but a few. There are multiple resources available to help communities implement protection programs, including the Drinking Water Academy of the EPA. There are transportation corridors within the delineation, therefore the Department of Transportation should be involved in protection activities. Drinking water protection activities for agriculture should be coordinated with the Idaho State Department of Agriculture, the Soil Conservation Commission, the local Soil Conservation District, and the Natural Resources Conservation Service.

A system with a fully developed drinking water protection program will incorporate many strategies, be they regulatory in nature (e.g. zoning, permitting) or non-regulatory in nature (e.g. good housekeeping, public education, specific best management practices). For assistance in developing protection strategies please contact the Twin Falls Regional Office of the DEQ or the Idaho Rural Water Association.

Assistance

Public water suppliers and others may call the following DEQ offices with questions about this assessment and to request assistance with developing and implementing a local protection plan. In addition, draft protection plans may be submitted to the DEQ office for preliminary review and comments.

Twin Falls Regional DEQ Office (208) 736-2190

State DEQ Office (208) 373-0502

Website: <http://www.deq.state.id.us>

Water suppliers serving fewer than 10,000 persons may contact Ms. Melinda Harper, Idaho Rural Water Association, at 208-343-7001 (mlharper@idahoruralwater.com) for assistance with drinking water protection (formerly wellhead protection) strategies.

POTENTIAL CONTAMINANT INVENTORY

LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as ASuperfund, is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100-year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RICRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.

References Cited

Crosthwaite, E.G., 1969. *Water Resources in the Goose Creek-Rock Creek Basins, Idaho, Nevada and Utah*, prepared by the U.S. Geological Survey in cooperation with Idaho Department of Reclamation, Water Information Bulletin No. 8.

Great Lakes-Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers, 1997. “*Recommended Standards for Water Works.*”

Idaho Department of Environmental Quality, 1997. *Design Standards for Public Drinking Water Systems*. IDAPA 58.01.08.550.01.

Idaho Department of Environmental Quality. Public Drinking Water System Standards (IDAPA. 58.01.08).

Idaho Department of Environmental Quality, 2001. *View Water Development Company Sanitary Survey*.

Idaho Division of Environmental Quality, 1996. *Drinking Water Supply Report – View Water Development Company Water System PWS #5160006*.

Idaho Department of Water Resources, 1993. *Administrative Rules of the Idaho Water Resource Board: Well Construction Standards Rules*. IDAPA 37.03.09.

USGS Geologic Map of Idaho.

Young, H.W. 1984. “Potentiometric-Surface Contours, Directions of ground water movement, and perched-water zones, Oakley Fan, Southeastern Idaho.” USGS Water Resources Investigations Report 88-4231.

Attachment A

View Water Development Company Susceptibility Analysis Worksheet

The final scores for the susceptibility analysis were determined using the following formulas:

1) VOC/SOC/IOC/Microbial Final Score = System Construction + (Potential Contaminant/Land Use
x 1.125)

Final Susceptibility Scoring:

0 - 7	Low Susceptibility
8 - 15	Moderate Susceptibility
16 - 21	High Susceptibility

1. System Construction

SCORE

Intake structure properly constructed	NO	1
Infiltration gallery or well under the direct influence of Surface Water	NO	2

Total System Construction Score 3

2. Potential Contaminant / Land Use - ZONE 1A

IOC Score	VOC Score	SOC Score	Microbial Score
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Land Use Zone 1A	RANGELAND, WOODLAND, BASALT	0	0	0	0
Farm chemical use high	YES	2	0	2	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO	NO	NO	NO	NO
Total Potential Contaminant Source/Land Use Score - Zone 1A		2	0	2	0

Potential Contaminant / Land Use - ZONE 1B

Contaminant sources present (Number of Sources)	YES	3	3	3	1
(Score = # Sources X 2) 8 Points Maximum		6	6	6	2
Sources of Class II or III leacheable contaminants or 4 Points Maximum	YES	11	1	1	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	Less Than 25% Agricultural Land	0	0	0	0

Total Potential Contaminant Source / Land Use Score - Zone 1B 10 6 7 2

3. Final Susceptibility Source Score

14 10 11 5

4. Final Source Ranking

Moderate Moderate Moderate Low